



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,116	10/31/2003	Shinji Tsuchikawa	511.41116VX1	8433

20457 7590 08/24/2005

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,116

Applicant(s)

TSUCHIKAWA ET AL.

Examiner

Michael J. Feely

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/058,919.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Pending Claims

Claims 1-11 are pending.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/058,919, filed on January 30, 2002.

Claim Rejections - 35 USC § 103

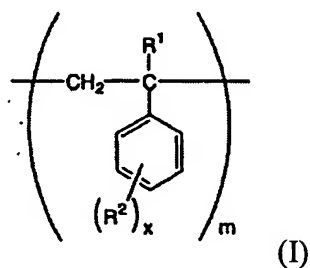
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

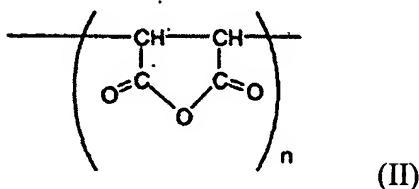
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tikart et al. (US Pat. No. 6,509,414) in view of Yeager (US Pat. No. 6,387,990).

Art Unit: 1712

Regarding claims 1 and 5-7, Tikart et al. disclose: (1) a thermosetting resin composition (Abstract), comprising: (1) a resin including: (a) a monomer unit represented by the following general formula (I):



wherein R^1 represents a hydrogen atom, a halogen atom, or a hydrocarbon group having 1 to 5 carbon atoms; R^2 or each of R^2 's independently represents a halogen atom, an aliphatic hydrocarbon group having 1 to 5 carbon atoms, or an aromatic hydrocarbon group; x is an integer of 0 to 3; and m is a natural number (Abstract; column 3, lines 25-43), and (b) a monomer unit represented by the following general formula (II):



wherein n is a natural number (Abstract; column 3, lines 25-43); and (2) a cyanate resin (column 4, lines 4-10); wherein the copolymerization ratio m/n between the monomer units in said resin (I) is from 0.8 to 19 (column 3, lines 25-43);

(5) further comprising (3) and epoxy resin and/or an isocyanurate compound (Abstract; column 4, lines 4-27);

(6) a prepreg using the thermosetting resin composition according to claim 1 (Abstract; column 5, lines 11-31); and (7) a laminated sheet formed using the prepreg according to claim 6, by laminate molding (Abstract; column 5, lines 11-31).

Tikart et al. disclose, “Mixtures of epoxy resins with bismaleimide resin, *cyanate resin* and/or bismaleimide triazine resin can also be applied;” (column 4, lines 8-10) however, they do not explicitly disclose that the cyanate resin has two or more cyanate groups per molecule.

Yeager discloses a similar epoxy-based composition used for the manufacture of preregs and electrical laminates. They disclose, “Other thermosetting resins optionally may be blended with the epoxy resin component in forming the curable composition disclosed herein including, for example, *cyanate esters*, bismaleimides, and unsaturated polyesters,” (column 7, lines 45-48), wherein the *cyanate esters* contain plural cyanate groups (column 7, line 52 through column 8, line 5). The teachings of Yeager demonstrate that cyanate esters *having two or more cyanate groups per molecule* are recognized in the art as suitable cyanate resins to be mixed into epoxy-based compositions used for the manufacture of preregs and electrical laminates. In light of this, it has been found that the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination – see *MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a cyanate resin having two or more cyanate groups per molecule, as taught by Yeager, in the composition of Tikart et al. because the teachings of Yeager demonstrate that polyfunctional cyanate esters are recognized in the art as suitable additional thermosetting resins in epoxy-based compositions used for the manufacture of preregs and electrical laminates.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 7-12, and 23-28 of U.S. Patent No. 6,667,107.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the patented claims anticipates the broader instant claims. The following is a table of corresponding claims:

<i>Instant Claim</i>	1	2	3	4	5	6	7	8	9	10	11
<i>6,667,107</i>	1,2	1,2,7	1,2,8	1,2,9	1,2,10	1,2,11	1,2,12	1,2,8	1,2,8,9	1,2,8,11	1,2,8,12

Or

<i>Instant Claim</i>	1	2	3	4	5	6	7	8	9	10	11
<i>6,667,107</i>	3	3,23	3,24	3,25	3,26	3,27	3,28	24	24,25	24,27	24,28

Allowable Subject Matter

7. Claims 2-4 and 8-11 would be allowable if rewritten to overcome the obviousness-type double patenting rejection(s) or with a timely filed terminal disclaimer.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely
Primary Examiner
Art Unit 1712

August 21, 2005